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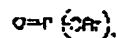
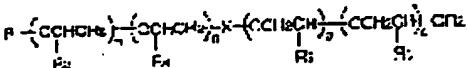
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(54) WORKING FLUID COMPOSITION FOR REFRIGERATING/AIR- CONDITIONING MACHINE AND REFRIGERATING/AIR-CONDITIONING APPARATUS USING SAME

(57) Abstract:

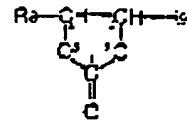
PROBLEM TO BE SOLVED: To obtain a working fluid composition which can prevent the viscosity decrease of a refrigerant/refrigerator oil mixture and the lubrication defects of a compressor by incorporating a refrigerant comprising propane and/or isobutane together with a polyalkylene glycol into the same.

SOLUTION: The polyalkylene glycol is represented by formula I (wherein R1 is H or 1-4C alkyl; R3 to R6 are each H or CH₃; X is 2-4C oxyalkylene; and (m), (n), (p), and (q) are each 1-30 provided when X is not present, then (p) and (q) are both 0). Preferably, 0.05-5.0 wt.% phosphorus compound represented by formula II or 0.05-5.0 wt.% cyclic carbonate compound represented by formula III is added to the polyalkylene glycol. In these formulas, R7 is 4-18C alkyl, oleyl, phenyl, or o-, m-, or p-tolyl; and R8 is H, or 1-4C (perfluoro)alkyl. In addition, the composition can improve the pull down (cool down) properties of a refrigerating/air-conditioning apparatus.



I

II



III

LEGAL STATUS

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